

WHAT IS CLAIMED IS:

1. An immunizing composition, comprising an immunizing effective amount of an antigenic product which induces an immune response against the β -secretase cleavage site of amyloid precursor protein (A β PP) and a pharmaceutically acceptable carrier, diluent, excipient, adjuvant, or auxiliary agent.
2. The immunizing composition of claim 1, wherein said antigenic product comprises a dendritic polymer, built on a core molecule, which is at least difunctional so as to provide branching, and containing up to 16 terminal functional groups to which an antigenic peptide, that comprises an A β PP epitope spanning the β -secretase cleavage site of A β PP, is joined by covalent bonds.
3. The immunizing composition of claim 2, wherein said dendritic polymer contains eight terminal functional groups to which an antigenic peptide is joined.
4. The immunizing composition of claim 2, wherein said A β PP epitope spanning the β -secretase cleavage site of A β PP comprises residues 1 to 8 of SEQ ID NO:1.
5. The immunizing composition of claim 2, wherein said A β PP epitope spanning the β -secretase cleavage site of A β PP comprises SEQ ID NO:5.
6. The immunizing composition of claim 2, wherein said antigenic peptide comprises two overlapping A β PP epitopes of said β -secretase cleavage site of A β PP.
7. The immunizing composition of claim 6, wherein said two overlapping A β PP epitopes are identical.
8. The immunizing composition of claim 2, wherein said core molecule is lysine.
9. The immunizing composition of claim 2, further comprising a molecule having adjuvant properties joined to said dendritic polymer.

10. The immunizing composition of claim 2, wherein said antigenic product is encapsulated in a liposome.

11. The immunizing composition of claim 1, wherein said antigenic product comprises a viral display vehicle displaying on its surface an A β PP epitope spanning the β -secretase cleavage site of A β PP.

12. The immunizing composition of claim 11, wherein said viral display vehicle is a filamentous bacteriophage.

13. The immunizing composition of claim 11, wherein said A β PP epitope spanning the β -secretase cleavage site of A β PP comprises residues 1 to 8 of SEQ ID NO:1.

14. The immunizing composition of claim 11, wherein said A β PP epitope spanning the β -secretase cleavage site of A β PP comprises SEQ ID NO:5.

15. A method for inducing an immune response against the β -secretase cleavage site of A β PP comprising administering the immunizing composition of claim 1 to a subject in need thereof to induce an immune response against the β -secretase cleavage site of A β PP and block β -secretase cleavage of A β PP, thereby inhibiting the formation of amyloid β .

16. A molecule comprising the antigen binding portion of an antibody against the β -secretase cleavage site of A β PP.

17. The molecule of claim 16 which is a monoclonal antibody.

18. The molecule of claim 16 which is a single chain antibody.

19. A filamentous bacteriophage display vehicle displaying the molecule of claim 18 on its surface.

20. A pharmaceutical composition, comprising the filamentous bacteriophage display vehicle of claim 19 and a pharmaceutically acceptable carrier, excipient, diluent, or auxiliary agent.

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21. A method for inhibiting the formation of amyloid β , comprising administering the filamentous bacteriophage display vehicle of claim 19 to an olfactory system of a subject in need thereof.

22. A method for inhibiting β -secretase cleavage of A β PP, comprising contacting the molecule of claim 16 with A β PP in the presence of β -secretase to inhibit β -secretase cleavage of A β PP.